

ABSTRACT

An internal combustion engine (1) generates power by burning a mixture of fuel and air in each combustion chamber

5 3. The internal combustion engine 1 is provided with an in-cylinder pressure sensor (15) disposed in each combustion chamber (3) and an ECU (20). The ECU (20) calculates control parameters at two predetermined points, each of which is a product of an in-cylinder pressure

10 detected by the in-cylinder pressure sensor (15) and a value obtained by exponentiating an in-cylinder volume at the timing of detecting the in-cylinder pressure with predetermined index, as well as calculates a correction value of a fuel injection quantity based upon a difference

15 in the control parameter between the two predetermined points. One of the two predetermined points is set after an intake valve (V_i) opens and before an ignition plug (7) ignites, and the other is set after the ignition plug (7) ignites and before an exhaust valve (V_e) opens.